

16. (Amended) The white, biaxially oriented, flame-retardant, UV-resistant polyester film comprising at least one layer, which comprises, based on the weight of this layer, from 2 to 60% by weight of COC, and the gloss of which is above 80, wherein the film also comprises from 0.1 to 5%, preferably from 0.5 to 3.0% by weight, of a UV stabilizer as light stabilizer, and also comprises an amount within the range from 1 to 20% by weight of a flame retardant, based in each case on the weight of the layer comprising the UV stabilizer and/or comprising the flame retardant, said layer containing regrind, said film showing no marked increase in yellowness compound to film containing no regrind.
- A2*  
*Contd*  
*Sub B2*  
*Contd*

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REMARKS

The due date for filing a response to this Office Action was April 30, 2002. A two month extension of time has been filed simultaneously herewith extending the due date to June 30, 2002.

On page 2 paragraph 1 of the Office Action, the Examiner has rejected Claims 1 – 16 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1 – 28 of copending Application no. 09/421,068 in view of UK Patent 2344596 and Balog et al. (US 3,950,301). The Examiner states that the UK Patent discloses the UV stabilizers claimed, and that Balog et al. teach the incorporation of organic phosphorus compounds as known flame retardants. The Examiner states that it would be obvious to incorporate the UV stabilizers and organic phosphorus flame retardants into the claimed invention of copending application 09/421,068. Because the present invention as well as the copending application have not issued as a patent, this rejection is provisional. It is unclear what the status and treatment will be of the copending application. Therefore a terminal disclaimer at this stage of the prosecution is premature. However, upon the

Examiner indicating that this rejection is the only rejection still pending in the application, the undersign will submit a terminal disclaimer in quick fashion such that this application would be allowed.

On page 4, paragraph 3 of the Office Action, the Examiner rejected Claims 1 –16 under 35 U.S.C. 103 as being unpatentable over Sasaki in view of Reidel, Minami and Kajiura in view of the British Patent '596 and Balog. The Examiner states that Sasaki shows everything except certain methods and additives and surface treatments, and the Tg values of cycloolefin polymers. The Examiner relies on Reidel, Minami or Kajiura to teach cycloolefin polymers having Tg values within the range claimed. The Examiner states that it would be obvious to one of ordinary skilled in the art to employ the cycloolefin polymers taught by Reidel, Minami or Kajiura in the polyester film of Sasaki and to use conventional methods, additives and/or surface layer treatments to improve the handling or characteristics of the film as indicating in Claims 2, 6 – 8 and 15. This rejection is respectively transverse.

In the "Background of the Invention" of the present application, it is noted that there are many known copolymers based on polystyrene or polyolefin, for example, but all have the common problem that upon the incorporation of regrind, these polymers yellow badly. On the other hand, the present invention employs a cyclo olefin copolymer (COC) with a polyester that shows no marked increase in yellowness when employing regrind, provided that the amount of COC employed ranges from 2 to about 60% by weight and that the COC has a Tg in the range of 70 to 270°C. Sasaki fails to recognize that the use of regrind would significantly increase the yellowness.

More specifically, it is noted that in the paragraph bridging columns 4 and 5 of Sasaki there are listed many polymers, which combined with the polyester would yield the invention of Sasaki. This laundry list includes cyclic olefin polymers. However, none of the examples shows or employs cyclic olefin polymer. More specifically, Examples 1 and 3 employ polystyrene while Examples 2 and 4 employ polypropylene. Neither of these

polymers are cyclic olefin polymers. Consequently, it is believed that Sasaki merely threw into the laundry list, the phrase "cyclic olefin polymer". Moreover, Sasaki does not teach such and Sasaki does not recognize that such films using polystyrene or using polyolefin would in fact significantly increase the yellowness when incorporating regrind. This is clearly demonstrated by the examples in the present invention.

Comparative Examples 1, 2, 3 and 4 which used or employed polypropylene (Comparative Examples 1, 2 and 3) and polystyrene (Comparative Example 4) show marked yellow coloration detectable. Each of these examples employs 50% by weight regrind. Thus Comparative Examples 1, 2, 3, and 4 indicate that the invention of Sasaki would show marked yellow coloring increase upon the employment of regrind. Claim 1, as now amended, calls for the incorporation of regrind and states that the film exhibits no marked increase in yellowness compared to film containing no regrind. In Example 1 of the present invention, it is noted that no regrind was used. In Example 2, however, the material of Example 1 was modified by adding 50% regrind into base layer. This same comparison with Example 3 (no regrind) and Example 4 (with regrind) is also noted. In Table 2, the results of Examples 1, 2, 3 and 4 are shown to have no marked yellow coloration difference.

Lastly, it is noted that no reference discloses "additives, conventions film - finishing methods, pigments, and/or surface layers" set forth in claims 10 and 11 - 16. Where is there support for the Examiner's position?

On page 6, paragraph 4 of the Office Action the Examiner rejects Claims 1 - 16 under 35 U.S.C. 103 as being unpatentable over Japanese Patent application '253 or '319 or '349 or '717 in view of UK application '596 or Balog. The Examiner states that it would be obvious to utilize the teachings of the UK Patent and Balog in any one of the Japanese patent applications. This rejection is respectfully transversed.

It is submitted that Japanese patent reference '717 does not teach whiteness. Furthermore, it is submitted that none of the Japanese references recognizes that the use of COC produces whiteness as set forth on page 6, lines 16 – 22 of the present application. Additionally, it is submitted that none of the references teaches no marked increased yellowness upon using regrind. Moreover, it is noted that the Examiner states that it is obvious to incorporate recycled scrap into the polymeric film, however no reference teaches this. The Examiner also says that the appropriate orientation and heat setting conditions for the film indicated in Claims 11 – 13 are also obvious, however no reference teaches this. The Examiner also states that the surface treatment set forth in Claims 11 – 12 and 15 are obvious, however no reference teaches this. It is submitted for all these reasons amended Claim 1 and all the remaining Claims 2 – 16 are now allowable over this rejection.

Attached hereto is a marked-up version of the changes made to the specification and to the claims by the current amendment. The attached page is captioned **“Version With Markings To Show Changes Made”**.

In view of the amendment to Claim 1 and in light of these remarks it is submitted the present application is now condition for allowance as such is earnestly solicited.

Respectfully yours,



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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

1. (Amended) A white, biaxially oriented, flame-retardant and UV-resistant polyester film comprising at least one layer, wherein at least this layer comprises, based on the weight of this layer, from 2 to 60% by weight of a cyclo olefin copolymer (COC), where the glass transition temperature of the COC is within the range from 70 to 270°C, and wherein the layer comprises at least one UV stabilizer as light stabilizer and a flame retardant, where at least the flame retardant, and preferably also the UV stabilizer, is fed directly as a masterbatch to the polyester during film production, said layer containing regrind, said film showing no marked increase in yellowness compound to film containing no regrind.
14. (Amended) The white, biaxially oriented, flame-retardant, UV-resistant polyester film comprising at least one layer, which comprises, based on the weight of this layer, from 2 to 60% by weight of COC, where the opacity of the film is above 60%, wherein the film also comprises from 0.1 to 5% by weight, preferably from 0.5 to 3.0% by weight, of a UV stabilizer as light stabilizer, and also comprises an amount within the range from 1 to 20% by weight of a flame retardant, based in each case on the weight of the layer comprising the UV stabilizer and/or comprising the flame retardant, said layer containing regrind, said film showing no marked increase in yellowness compound to film containing no regrind.
15. (Amended) The white, biaxially oriented, flame-retardant, UV-resistant polyester film comprising at least one layer, which comprises, based on the weight of this layer, from 2 to 60% by weight of COC, and the whiteness of which is above 70%, wherein the film also comprises from 0.1 to 5% by weight, preferably from 0.5 to 3.0% by weight, of a UV stabilizer as light stabilizer, and also comprises an amount within the range from 1 to 20% by weight of a flame retardant, based in each case on the weight of the layer comprising the UV stabilizer and/or comprising the flame

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retardant, said layer containing regrind, said film showing no marked increase in yellowness compound to film containing no regrind.

16. (Amended) The white, biaxially oriented, flame-retardant, UV-resistant polyester film comprising at least one layer, which comprises, based on the weight of this layer, from 2 to 60% by weight of COC, and the gloss of which is above 80, wherein the film also comprises from 0.1 to 5%, preferably from 0.5 to 3.0% by weight, of a UV stabilizer as light stabilizer, and also comprises an amount within the range from 1 to 20% by weight of a flame retardant, based in each case on the weight of the layer comprising the UV stabilizer and/or comprising the flame retardant, said layer containing regrind, said film showing no marked increase in yellowness compound to film containing no regrind.